

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ART+COM INNOVATIONPOOL GMBH, )  
Plaintiff, )  
v. ) C.A. No. 14-217 (TBD)  
GOOGLE INC., ) REDACTED -  
Defendant. ) PUBLIC VERSION

**SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF REGARDING  
STEP (E) OF CLAIM 1 OF U.S. PATENT NO. RE44,550**

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## I. INTRODUCTION

In further opposition to Plaintiff ART+COM InnovationPool GMBH’s (“ACI”) motion in limine #1 (D.I. 365, JPTO Exs. 13.1.A-C), and at the Court’s request during the May 13, 2016 pretrial conference, Defendant Google Inc. (“Google”) submits this supplemental claim construction brief addressing the construction of step (e) of Claim 1 of U.S. Patent No. 44,550 (“550 Patent”). Step (e) recites: “representing the data for the field of view in a pictorial representation having one or more sections.” On June 26, 2015, this Court issued a *Markman* opinion construing step (e) to mean “*displaying* the data for the field of view in a pictorial representation having one or more sections.” D.I. 148 at 15 (emphasis added). In his October 9, 2015 non-infringement expert report, Dr. Goodchild used this construction to opine that the accused Google Earth software does not perform step (e) because it does not “display” anything. Ex. A (Goodchild Report) at ¶¶ 101, 102. Instead, “third-party software (OpenGL or WebGL), firmware (the client’s graphic processing unit or GPU), and hardware (the client’s display screen)” performs the “displaying” step. *Id.* at ¶ 102. Although Dr. Goodchild’s opinion follows directly from the “displaying” requirement of the Court’s construction, ACI nonetheless asks Your Honor to redo the claim construction performed by Judge Andrews.

Step (e) should be construed consistently with the Court’s prior construction and the intrinsic evidence to mean: “displaying on a screen the data for the field of view in a pictorial representation having one or more sections.” Google’s addition of “on a screen” to the Court’s existing construction clarifies that “displaying” requires actually showing information on a screen. Google’s addition is also supported by the Court’s reasoning in its *Markman* opinion and the intrinsic evidence. The specification in particular: (1) uses the term “representing” (or “representation”) as in step (e) to refer to displaying data on a screen; (2) describes the claimed invention’s purpose and function as displaying data; (3) repeatedly states that image data is

“shown” to the user; and (4) includes generic “display devices” or “display units” in every disclosed embodiment. ACI’s suggestion, meanwhile, that step (e) can encompass merely obtaining and processing the data for display — but not then actually “displaying” anything on a screen — is unsupported by the intrinsic evidence and was rejected in the Court’s prior *Markman* opinion.

## **II. CONSISTENT WITH THE COURT’S EXISTING CONSTRUCTION, STEP (E) REQUIRES ACTUALLY “DISPLAYING” DATA ON A SCREEN**

The Court already construed “representing” in step (e) of Claim 1 to mean “displaying” as Google had proposed. D.I. 148 at 15. In reaching its construction, the Court expressly rejected ACI’s arguments that step (e) merely “focuses on obtaining and processing the data so that it is ready for display” and that step (e) “is focused on sectionalizing the data, not displaying it.” *Id.* at 15-16. Instead, the Court sided with Google’s construction, reasoning:

I do agree, however, with Defendant’s argument that the data ***must be displayed in some fashion***. In the prosecution history, the applicants explained, “Claim 1 of the applicants[’] invention teaches a method to store, retrieve *and display* space related data of a selectable object with a preset image resolution.” (D.I. 84-3 at p. 7 (emphasis added)). In addition, some dependent claims indicate that representing the data involves displaying it. For example, claim 25 adds, “wherein the representation in the steps (e) and (f) is in the form of a globe.” (’550 patent, col. 11, 11. 60-62). Claim 26 adds, “wherein the representation in the steps (e) and (f) is in the form of cartographic form of representation.” (Id. col. 11, 11. 63-65). These dependent claims indicate that ***the representing step at issue here includes some form of display***.

*Id.* at 16-17 (emphasis added). Thus, the Court found that step (e) requires the actual display of information, not merely obtaining or processing data so that it is “ready for” display as ACI argued before and now argues again.

In addition to the prosecution history and dependent claims cited in the Court’s opinion, the specification supports that the claims require actual “display” on a screen. First, the

specification repeatedly uses “representing” (or “representation”) as in step (e) to refer to the display of information on a “screen” or “display unit.” The Abstract describes “a *screen representation* of a view of the object according to a field of view of a virtual observer.” ’550 Patent at Abstract (emphasis added). Similarly, the specification refers to “the invention for carrying out this method” as “compris[ing] a display unit” and the “*representation* of the data on the *display unit*.” *Id.* at 2:44-51 (emphasis added). Another passage describes a computer (“node 3”) sending the “representation” of an image to a “display device” for “viewing”: “node 3 determines the *representation* of the data centrally stored therein and sends this transmission for *viewing* over the supply network 8 to the *display device*.” *Id.* at 7:67-8:3 (emphasis added); *see also id.* at 7:16-19 (“all of the image data required for *representation* are transmitted to the *display device*”) (emphasis added). Thus, the specification uses the term “representation” coextensively with the action of displaying data on a screen for viewing.

Second, the specification describes the claimed invention’s purpose and function as displaying or “visualizing” data. The Abstract and summary of the invention characterize the “invention” as “a method and a device for pictorial representation of space-related data” and explain this invention is used “for *visualizing* topographic or meteorological data in the form of weather maps or weather forecast films.” *Id.* at 1:15-20 (emphasis added); *see also id.* at Abstract. The specification further describes Figure 1 as “a device according to the invention for *displaying* geographically related data of the earth.” *Id.* at 6:16-18 (emphasis added). Such specification statements tying the “invention” and its purpose and function to “visualizing” or “displaying” data signify that the claims and in particular step (e) require the actual “display” of data. *See, e.g., In re Abbott Diabetes Care, Inc.*, 696 F.3d 1142, 1149 (Fed. Cir. 2012) (construing claims directed to a sensor to not require “external cables or wires” because “the

primary purpose of the invention was to provide ‘a small, compact device that can operate the sensor and provide signals to an analyzer without substantially restricting the movements and activities of the patient’”).

Third, consistent with the claimed invention’s purpose and function of displaying data, the specification repeatedly states that images are “shown” to the user:

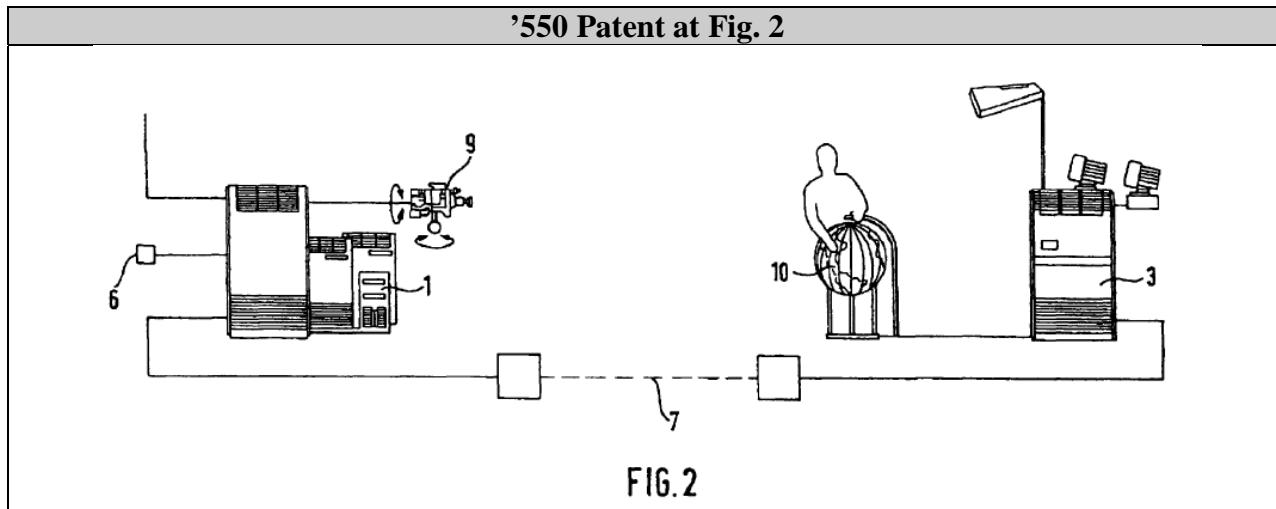
- “After each transmission and central storage of data, *an image representation results*, even if the data are insufficient to make possible the desired image resolution. . . . Thus if the observer moves extremely rapidly, the case is avoided in which no image is *shown*.” ’550 Patent at 3:41-48 (emphasis added).
- “Thus the observer is not limited as to his travelling speed and yet it is ensured that an image is always *shown*.” *Id.* at 3:49-51 (emphasis added).
- “[A] first data set, which has a coarse spatial resolution, is called up from at least one of the spatially distributed data sources, transmitted and centrally stored, and the *field of view is shown*.” *Id.* at 2:25-28 (emphasis added).

Notably, the last quotation above describes each of steps (c) through (e) of Claim 1: “called up from at least one of the spatially distributed data sources” corresponds to step (c)’s “requesting”; “centrally stored” corresponds to step (d)’s “centrally storing”; and finally, “field of view is shown” corresponds to step (e)’s “representing.” Thus, “representing” in step (e) requires that data actually be “shown.”

Fourth, every disclosed embodiment uses conventional “display units” or “display devices” to display data on screen without any further technical explanation. The specification describes Figure 1’s depiction of the “structure of a device according to the invention” as including a “plurality of display units 5.” ’550 Patent at Fig. 1, 6:16-23. The specification also describes each of steps (b) through (e) in Claim 1 as being performed by the system in Figure 2 below, which depicts the user’s computer (called “node 3” in the specification) on the right connected to display screens. *Id.* at 7:59-8:3. According to the specification, “node 3” sends the

*“the representation of the data . . . for viewing over the supply network 8 to the display device.”*

*Id.* at 7:67-8:3 (emphasis added).



In the embodiment depicted in Figure 2 above, the user's computer or “node 3” is not just software for processing data for display, but as shown and described in the specification, is connected to a “display unit” or “display device” for actually displaying information to the user:

- “The conduits 7 serve as an interchange network for rapid interchange of information between individual nodes and the conduits 8 serve as a supply network *for supplying the screen view* from the evaluation devices 1, 2 and 3 to the *display unit 5*.” *Id.* at 6:31-35 (emphasis added).
- “In the supply network 8, substantially all of the *image data required for representation are transmitted to the display device 5*.” *Id.* at 7:16-18 (emphasis added).
- “The device according to the invention for carrying out this method accordingly comprises a *display unit* and an input unit for the location and the direction of view of the observer. The device according to the invention further has a plurality of spatially distributed data sources, a central data memory, and a data transmission network between these and an evaluation unit, in order to determine the *representation of the data on the display unit* from the centrally stored data.” *Id.* at 2:44-51 (emphasis added).

And in an additional embodiment, the user's “node computer” is a Silicon Graphics computer workstation: “Systems of the company Silicon Graphics (SGI Onyx) were used as a node computer. This computer is capable of displaying more than 500,000 texturized triangles per second and consequently is suitable for rapid picture build-up.” *Id.* at 6:45-49. Because

every disclosed embodiment describes displaying as occurring on a screen, the “representing” of step (e) must also display information on a screen. *See, e.g., Edwards Lifesciences LLC v. Cook, Inc.*, 582 F.3d 1322, 1331 (Fed. Cir. 2009) (construing claims to require “wires” because “every embodiment described in the specification and shown in the drawings includes wires”); *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1375 n.4 (Fed. Cir. 2009) (requiring that the recited “spike” be “pointed” because “every embodiment in the specification including the preslit trampoline seal uses a spike to pierce the seal”).

### **III. ACI’S ARGUMENTS CONCERNING THE “DATA FOR THE FIELD OF VIEW” FAIL TO OBTAIN THE “DISPLAYING” REQUIREMENT OF STEP (E)**

Having lost its previously proposed construction, ACI reformulates its prior rejected arguments that step (e) encompasses pre-display activity such as processing data for display by arguing that the “data for the field of view in a pictorial representation” in step (e) can be “raw image data” that “must be processed before being displayed.” (D.I. 365, JPTO Ex. 13.1.A at 3.) ACI’s arguments, however, completely ignore the “displaying” requirement of the Court’s construction. Although the “data” and “pictorial representation” of step (e) can be in a raw format that is not displayable, the Court’s construction still requires that the data be ultimately displayed. In its prior *Markman* briefing, ACI did not identify any embodiments where data is merely obtained or processed for display, but not actually displayed. Nor did it identify any other evidence supporting its rejected arguments that “representing” means something short of “displaying.” D.I. 84 at 56-57.

Consistent with the Court’s prior construction, Dr. Goodchild opines that the display of data is not performed by Google Earth, but instead by third-party “hardware (the client’s display screen).” Ex. A (Goodchild Report) at ¶¶ 102. And contrary to ACI’s assertion, Dr. Goodchild never opines that the “data for the field of view in a pictorial representation” must be in a final,

displayable format. Instead, in the section of his report cited by ACI, Dr. Goodchild stated that, in addition to not “displaying” anything, Google Earth does not even create the raw “data for the field of view in a pictorial representation” that must be further processed before being displayed. Rather, the “data for the field of view in a pictorial representation” is formed by “third-party software, firmware, and software.” Ex. A (Goodchild Report) at ¶ 102.

Dr. Goodchild’s opinion is therefore not only consistent with the Court’s construction and its “displaying” requirement, but he uses that construction to opine that the Google Earth software cannot perform step (e) because the software does not “display” anything.

#### IV. CONCLUSION

For the foregoing reasons, step (e) should be construed consistently with the Court’s prior construction and the intrinsic evidence to require the actual display of data on a screen. Because Dr. Goodchild’s opinions for step (e) are fully consistent with this construction, ACI’s first motion in limine (PTO Ex. 13.1) should be denied as to step (e).

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